

REMARKS

Summary of Office Action

Claims 1-8, 10, 12, 13 and 16 were pending in this application.

Claims 10 was rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification.

Claims 1, 12, and 13 were rejected under 35 U.S.C. § 103(a) as being obvious from Masahiro et al. JP 2004-010409 ("Masahiro").

Claims 2-5, 8 and 16 were rejected under 35 U.S.C. § 103(a) as being obvious from Masahiro in view of Hase et al. U.S. Patent No. 5,839,718 ("Hase"), Kanerari et al. U.S. Patent No. 6,431,236 ("Kanerari"), Murazaki et al. U.S. Patent No. 6,617,781 ("Murazaki") and Yocom et al. U.S. Patent No. 6,071,432 ("Yocom").

Claims 6 and 7 were rejected under 35 U.S.C. § 103(a) as being obvious from Masahiro in view of Murayama et al. U.S. Patent No. 5,424,006 ("Murayama").

Summary of Applicants' Reply

Applicants have canceled claim 10 and have added new claims 17-19 to more particularly define the invention. No new matter has been added and the amendments are fully supported by the originally filed specification (see, e.g., applicants' specification at p. 14, Example 4).

The Examiner's rejections are respectfully traversed.

Reply to the Section 112 Rejection

Claims 10 was rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification. Claim 10 has been

canceled. Accordingly, the rejection of claim 10 is moot.

Reply to the Rejections Under
35 U.S.C § 103(a)

Claims 1, 12, and 13 were rejected under 35 U.S.C. § 103(a) as being obvious from Masahiro. Claims 2-8 and 16 were rejected under 35 U.S.C. § 103(a) as being obvious from Masahiro in view of Hase, Kanerari, Murazaki, Yocom, or Murayama ("secondary references").

Applicants' claim 1 is directed to a light-storage self-luminescent glass that includes (a) 0.01-40% by weight of a light-storage self-luminescent material activated by multiple ions and (b) 99.99-60% by weight of a matrix glass. The light-storage self-luminescent material has a particle size ranging from 0.8 mm to 20 mm.

Masahiro describes a process for producing a glass article which consists of molten glass and a powdery luminous stone. The size of the powdery luminous stone ranges from 0.1-1.0 mesh (Masahiro, Abstract and paragraphs 7, 12 and 14).

The Examiner cites to a Particle Size Conversion table ("Sigma-Aldrich") table and alleges that according to the Conversion table, a particle size with a range of 0.1-1 mesh is equivalent to 0.1-1 inch, or 2.54-25.4 millimeters (Office Action, page 3). Applicants respectfully disagree.

Applicants respectfully submit that according to Sigma-Aldrich the **mesh size** is equal to the hole size (as alleged by the Examiner) only for a hole size that is greater than 0.25 inch. For hole sizes less than 0.25 inch the **mesh size** is equal to the **number of openings per inch**. The Examiner's allegations that a particle size of 0.1 mesh is equal to 0.1 inch cannot be correct

because 0.1 inch is less than 0.25 inch. Therefore, a hole size of 0.1 inch according to Sigma-Aldrich would be designated as 10 mesh (i.e., 10 holes per inch) and not 0.1 mesh as the Examiner contends. Thus, 0.1 mesh must mean 0.1 holes per inch which is equal to a hole size of 10 inches (254 millimeters).

Because the stone (i.e., particle) described in Masahiro has a size of 0.1-1 mesh it must mean that the stone is as large as 10 inches (254 millimeters) and as small as 1 inch (25.4 millimeters). Thus, applicants respectfully submit that Masahiro does not show or suggest a light-storage self-luminescent glass particle with a particle size from 0.8 mm to 20 mm, as defined by applicants' claim 1. None of the secondary references, cited by the Examiner as showing additional limitations of the claims, make up for the deficiencies of Masahiro in that regard.

Accordingly, because Masahiro and the secondary references, whether taken alone or in combination, do not show or suggest a light-storage self-luminescent glass including a light-storage self-luminescent material with a particle size from 0.8 mm to 20 mm (in which such sizes have a substantially affect on the self-luminescence of light-storage self-luminescent material), applicants' independent claim 1, and claims 2-8, 12, 13 and 16 which depend directly or indirectly from claim 1, are patentable.

New Claims 17-19

Applicants have added new claims 17-19 to more particularly define the invention. Claim 17 is directed to a light-storage self-luminescent glass that includes (a) 0.01-40% by weight of a light-storage self-luminescent material activated by multiple ions and (b) 99.99-60% by weight of a matrix glass. The light-

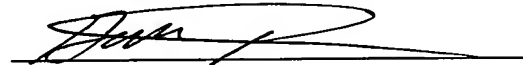
storage self-luminescent material has a particle size ranging from 0.8 mm to 2 mm.

Applicants respectfully submit that even if the range of 0.1-1 mesh is equivalent to 0.1-1 inch as alleged by the Examiner (which it is not), Masahiro does not show or suggest a particle size ranging from 0.8 mm to 2 mm. A particle with a range of 0.1 inch (2.54 mm) to 1 inch (25.4 mm) is not the same as applicants' particle ranging from 0.8 mm to 2 mm. Therefore, claim 17, and claims 18 and 19 which depend from claim 17, are patentable.

Conclusion

For the reasons set forth above, applicants respectfully submit that this application, as amended, is in condition for allowance. Reconsideration and prompt allowance of this application are respectfully requested.

Respectfully submitted,



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